DOCUMENT RESUME

ED 448 554 EC 308 168

AUTHOR	Walters, Lilly
TITLE	One Hand Typing and Keyboarding for the Disabled Student.
PUB DATE	2000-10-20
NOTE	9p.
PUB TYPE	Guides - Non-Classroom (055)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Adults; *Assistive Devices (for Disabled); Children; Design Requirements; Evaluation Criteria; *Keyboarding (Data Entry); *Physical Disabilities; *Selection; *Typewriting; *Word Processing; Work Environment

ABSTRACT

This paper discusses how students with disabilities can learn to keyboard using one hand. It lists keyboarding choices for those with a hand disability, including learning the one-hand method on the standard keyboard, changing the keyboard over to a One Hand Dvoark, buying a one hand keyboard, and using an alternative to typing, such as voice activation. Questions that should be considered before choosing a method are provided. Using the One Hand QWERTY Touch Typing System is recommended because there is no adaptive equipment needed. Information is provided on how to position the equipment for one-hand typing, choosing a chair, and adapting the rules for an individual body's challenges. Suggestions also are made for avoiding aches and damage to the body and for easing aches, strains, and pains. (CR)

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ONE HAND TYPING AND KEYBOARDING FOR THE DISABLED STUDENT

BY

LILLY WALTERS

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One Hand Typing and Keyboarding For The Disabled Student

by Lilly Walters,
International speaker, best selling author, speakers bureau executive,
and one hand typist!

If the student has a severe disability regarding an upper limb, they receive a great deal of support from occupational and vocational therapists, who usually suggest alternative keyboards, and voice activated computers.

However, the student with good use of one hand, usually does not receive as much attention as they don't need the professional advice. As a result, these people are often not encouraged to learn to type. I know, I fall into this category.

The Keyboarding Choices For Those With A Hand Disability

1) Learn the ONE HAND method on the standard keyboard (least hassle, totally mainstream, my personal choice if one hand has close to full use)

2) Change the keyboard over to ONE HAND Dvoark (this is a free set up in MAC's or PC's. This is easier on the hands, faster, less fatiguing - but, also **not my choice as it is not used in the mainstream**)

3) Buy a one hand keyboard, or alternative devices (easiest on the hand, but comparatively expensive. $300 - $1000)

4) Use alternatives to typing: voice activation and macros (whatever system is choosen to use as a one hand typist, sometimes voice activation and always the use of marcos will ease the load on the hands)

Before the one handed person make a decision, ask:

1) Is the "good" hand strong? Can it take the burden normally shared by two hands? (Then my choose the standard ONE HAND QWERTY)

2) Does this person work on their own - perhaps they are retired? Will they need to use other people's computers, or will others need to use their

computer? (If possible to the circumstances, you want to avoid adaptive devices if they plan share a computer at work or at play. But, if they work at home on their own equipment, a fancy one hand keyboard might be a terrific tool. Also, I find the option of ONE HAND Dvorak, or HALF QWERTY less objectionable)

Should the one handed person learn to type with one hand, or use another method?

If you, or your student, has good use of at least one hand, a standard keyboard **can** easily be used. No gimmicks, no add-on equipment or software. When alternative systems are used commonly in the mainstream, then the one-hand typist should commonly be encouraged to should use them. Until then, these people should be helped to use mainstream tools whenever possible.

Most research (research usually done by two handed adults) points to a keyboard layout system known as Dvoark. The Dvoark system has layouts for two hands, just the right, or just the left hand. Although it only takes 30 seconds to set up most computers to the Dvoark system, I am strongly against it.

One hundred years ago, typing was a new skill. The typists went so fast (crawling by today's standards) the keys would jam. So they created the QWERTY layout (see the keys on your keyboard starting at the top left) because it was so hard, it slowed us down! Dr. Dvoark came up with a layout that is faster, and easier for the typist, **but it is not smarter for the person with one hand.**

Why use the standard QWERTY one hand typing method?

One: Sellablity in the job market. The reality is, the easier it is to bring someone into the workplace, the more appealing they are as an employee. I am a one hand typist. I can step up to any standard keyboard, ask a two handed person to move over, and assist them with the challenges they are facing with the task at hand (no pun intended!). I am not disadvantaged by using me mainstream equipment, my employers are not disadvantaged by hiring me. The 30 seconds needed to change a keyboard over to Dvoark would separate me from the other workers.

Two: MY main issue in alternatives to the standard keyboard, is these kids do not want one more reason to feel different. The number one toy today is the computer, hence, the keyboard. Imagine a child not being able to play with his friends because he does not know how to use their "normal" keyboard. Or, if he does play with them, he must struggle to figure out the keyboard they are using. That tiny 30 seconds needed to change a keyboard over to Dvoark is unthinkable to children at play.

How The One Hand QWERTY Touch Typing System Works

With good use of either the right, or left hand, (at least four fingers) the student can type on a standard keyboard, with no overlays, or assistance devices. Within 1-3 weeks, working through drills, the fingers will learn HOME BASE, and which keys each finger is responsible for. The student can then step into any mainstream class or typing tutor software program to finish learning speed and accuracy with touch typing.

The typist centers the four strong fingers on FGHJ.

Note, Finger One handles all above, and below F, plus all the keys to the left of F. See the chart at http://www.aboutonehandtyping.com for the other finger placements.

The thumb operates the space bar.

If the student has small hands, consider a lap top, which has a smaller keyboard, or a space spacing keyboard (see resources at http://www.aboutonehandtyping.com)

Overview of were to position the equipment

Positioning the equipment is vital to the one-hand typist!

* **Lighting:** Not behind you, must not glare on the screen

* **Keyboard**: Offset from the center of your body, directly in front of the arm that will be use to type

* **Mouse**: Place the mouse on the same side of the keyboard as the hand to whom you plan to assign the job of Mouse Master! (see more at later)

* **Screen**: Directly centered in front of the body

* **Manual**: If possible, directly in front of the student, below the screen, standing upright. Or, place it next to the keyboard.

* **Chair**: Directly in front of the screen

Mouse: Adapt To Your Circumstance

Once the One-Hand typing system, the student will have a great need for the mouse. At that point, they will need to adapt.

Place the mouse on the same side of the keyboard as the hand to whom the job of Mouse Master is assigned.

Less-able Hand As Mouse Master

If there is use of the less-able hand, then give it the job of Mouse Master. This will balance the workload of the body, and help keep the student sitting up straight. Place the mouse directly in front of the arm to be used as Mouse Master.

One-Hand Only for the Keyboard and Mouse?

If they only can use one-hand, experiment with the mouse. Consider placing it between the keyboard, and the screen. Or, they might find a small pillow, with a very thin, but wide book, to set into the lap as a good spot of the mouse. There are also many pillow type lap trays available now in stores.

Strictly one-handed typists will need to use the mouse as little as possible. The one good hand is going to be very busy typing other stuff! So, whenever possible, use keyboard commands instead of the mouse. There are keyboard commands for ***almost*** everything on a computer.

In today's Internet dependent world, it is very difficult to navigate the on the Web without a mouse. You click on the hyperlinks to move from one page

to another.If the more-able hand needs to handle mouse, and keyboard duties, internet tasks will not be terribly tasking, as very little typing is done while surfing the Web.

If, after diligent practice, the student find using the standard mouse too difficult with the use of only one hand, consider purchasing a pedal mouse, operated by one, or both feet (examples at RESOURCES, at http://www.aboutonehandtyping.com)

What Type Of Mouse?

It took me years to figure out which mouse was best for me. I am able to use my less-able hand as my Mouse Master. For 8 years I used a standard mouse. But, I often spend 10 - 14 hours a day at my keyboard, doing serious typing on my books. One day, my less-able hand just went into a revolt from the repetive motion. I needed to change. Now I find a roller ball works well for me. But you will need to play with several to see which will fit best.

Chairs and Rules On How To Sit

My hope for every one handed typist is that they will fall in love with typing, and the wonderful world it will open to them! If they do, they are going to get pooped! Everybody gets pained and fatigued doing the same motions over and over.

Rules

* Find a chair that is comfortable. You will only be a good student for as long as your derriere is comfy!
* Sit up straight. The spine should be going straight up towards the sky.
* The body must not be twisted to the left or right.
* The head should be looking straight forward, not downwards, nor upwards.
* The arms should come naturally from the body. If they hold them up, fighting gravity, they will become tired much too soon.

Adapting The Rules To Your Body's Challenges

I find my less-able hand does not bend the way other hands bend. I had a huge bean bag made by a friend; it holds my mouse at the angle and lets my wrists be in a more natural position.

Once you get started, pay attention to how the hands and body feel. If they are fatigued, try moving the mouse to a higher point, or lower. My mother has a short stand, at the just a bit lower than the level of her lap, that holds her mouse. I like my mouse higher, about the level of my waist. I also have my mouse on a fairly solid bean bag that allows me to have the mouse at a more natural 45% angle. I also like my screen much higher than most people do, it is easier on my eyes. Experiment, working towards comfort

Energy and Aches

Keyboarding, and the great world that will be open to you, is ***addicting***! You will want to spend hours glued to your keyboard. At first, you won't notice any aches at all. I see typists sit on the floor,with the keyboard in the laps, for hours, and they just get a tiny bit stiff. You can too, for several weeks, **then you will start to do permanent damage!** Remember, we are asking one hand to do the work of two. Take care of it!

To Avoid Damage To Your Body

If you do the same motion over, and over, like typing, you being to get permanent aches. To avoid these:

* Get up and move every 15 minutes. Wiggle and shake your body, exercise as you can for 15 - 30 seconds, give your body, your eyes, your hands and wrists, a good stretch.
*Make sure to stretch out your hands and wrists. Gently pull your hand back, then press it forward. If you are using two-hands, do this with both hands. Don't make them hurt, do make the pull a nice ***pleasant*** stretch.
* Take care of your eyes! They will become glued to the screen for so long, they will start to go bad! Every few minutes focus on something across the room, then close you eyes for a count of 10. Your eyes will appreciate this habit 10 years from now and treat you well.

To Help Ease Aches, Strains and Pains

Experiment, with what causes the least stress to your wrists and arms.

* Move the height of your keyboard (hopefully you have one of those adjustable drop-down keyboard racks). You might need to adjust it every few hours
* Alternate the tilt of keyboard and/or your mouse. You may want the keyboard very low, with the end closest to you lifted very high, perhaps at a 45 degree angle.
* Move the placement of your mouse to a higher, or lower level.
* Get a beanbag made that lifts your wrists to a position that is natural and comfortable. I have two and I switch them every hour. Shake and form your bean bag to fit your body for the greatest comfort. Bean bags can also be used to lift the keyboard at angles so it is more comfortable. Beans bags can be easily made from beans or rice, or purchased from most toy stores, and thrift shops. Some very small pillows will work well too.
* Have a small pillow or two that you can place under your elbow/s.
* Consider wrist braces. Many types are sold at the pharmacy. If you use them, take your arm/s out of the braces every 15 minutes, stretch and shake your arms and wrists.

for more on one hand typing: http://www.aboutonehandtyping.com
Phone 626-335-8069, Fax 626-335-6127, E-mail
Lilly@aboutonehandtyping.com